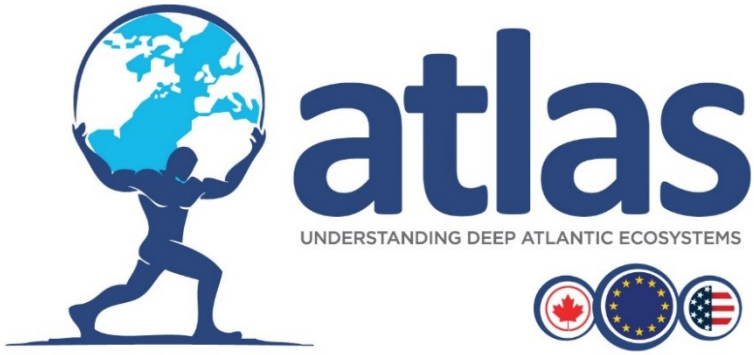

A trans-Atlantic assessment and deep-water ecosystem based spatial management plan for Europe

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Peeping through the deep: Insights to the reproductive strategies of cold water gorgonians in the Azores Archipelago

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Cold-water coral (CWC) habitats in the Azores Archipelago are formed mainly by octocoral species which form dense aggregations known as coral gardens, occurring over a bathymetric range of approximately 200 and 2200 m of depth. Due to their relevant role as habitat-forming species for a variety of marine organisms and high vulnerability to anthropogenic activities, coral gardens are considered in many cases as Vulnerable Marine Ecosystems (VMEs). The effective conservation and management of these CWC species and the ecosystems they form requires in-depth knowledge about their ecology, population biology, and connectivity, including their reproductive strategies and life history traits. Current knowledge on reproduction of CWCs is fairly scarce and limited to some species. The objective of this study is to gather information on the reproductive biology and ecology of some important habitat forming octocorals in the Azores, including *Viminella flagellum*, *Dentomuricea aff. meteor*, *Acanella arbuscula* and *Acanthogorgia armata*. By using a variety of methods, such as the collection of specimens through by-catch from deep long-line fisheries and scientific cruises, histological processing and opportunistic observations of specimens kept in aquaria, we attempt a first insight to their sexual reproduction, including sexuality, reproductive mode and reproductive seasonality, as well as to strategies of asexual reproduction such as fragmentation and polyp bail-out.